CLAIMS

We Claim:

1. A system for absorbing energy from an impact, said system comprising:
an energy absorbing member comprising first and second opposing walls;
at least one rib disposed between said first and second opposing walls;
said energy absorbing member comprising a thermoplastic, said thermoplastic comprising a polyolefin based resin and 35-75% by weight of an amorphous resin.

2. The system according to claim 1, wherein said thermoplastic has a flexural modulus of between about approximately 9,000 kg/cm^2 and about approximately 22,000 kg/cm^2.

3. The system according to claim 1, wherein said thermoplastic has a 15 to 40 kg/cm^2 Izod impact value at an ordinary temperature.

4. The system according to claim 1, wherein said polyolefin based resin is a polypropylene resin, and said amorphous resin is at least one resin selected from the group of resins consisting of polystyrene resin, impact resistant polystyrene resin, acrylonitrile-butadiene-styrene resin, polyphenylene ether resin, and mixtures thereof.

5. A system for absorbing energy from impacts, said system comprising:
a blow molded energy absorbing member comprising;
first and second opposing walls;

at least one fused pair of first and second recessed ribs disposed between said first and second opposing walls;

said first recessed rib being integrally molded from said first wall and having a first recessed rib end;

said second recessed rib is integrally molded from said second wall and having a second recessed rib end;

said first and second recessed ribs being integrally fused at a welded surface disposed between said first and second recessed rib ends;

said energy absorbing member comprising a thermoplastic, said thermoplastic comprising a polyolefin based resin and 35-75% by weight of an amorphous resin, and having a 15 to 40 kg/cm^2 Izod impact value at about approximately normal temperature.

6. The system according to claim 5, wherein said polyolefin based resin is a polypropylene resin, and said amorphous resin is at least one resin selected from the group consisting of polystyrene resin, impact resistant polystyrene resin, acrylonitrile-butadiene-styrene resin, polyphenylene ether resin, and mixtures thereof.

7. A system for absorbing energy from an impact, said system comprising:

an energy absorbing member comprising first and second opposing walls;

said energy absorbing member comprising blow molded thermoplastic;

at least one rib disposed between said first and second opposing walls; and

said thermoplastic comprising a first resin, having a flexural modulus of not greater than about approximately 2,000 kg/cm^2, and a polyolefin based resin.

8. The system according to claim 7,wherein said first resin has a flexural modulus not greater than 200 kg/cm^2.

9. The system according to claim 7, wherein said first resin is at least one resin selected from the group of resins consisting of olefin based elastomers, styrene based elastomers, low density polyethylene, straight chain-like low density polyethylene, low density polyethylene, straight chain-like low density polyethylene and mixtures thereof.

10. The system according to claim 7, wherein the polyolefin based resin is at least one resin selected from the group consisting of a polyethylene, a polypropylene and a mixture thereof.

11. The system according to claim 7, wherein said first resin comprises an olefin based elastomer and said olefin based elastomer is at least one elastomer selected from the group consisting of ethylene-propylene copolymer rubber, ethylene-butene copolymer rubber, propylene-butene copolymer rubber, hydrogenation product of butadiene-styrene copolymer rubber, and mixtures thereof.

12. The system according to claim 7, wherein said first resin is added to said polyolefin based resin in a proportion of about approximately between 3 to 20 parts by weight.

13. The system according to claim 7, wherein said first resin to be added to the polyolefin based resin is a thermoplastics resin having a glass transition temperature not higher than about approximately -30°C.

14. A system for absorbing energy from an impact, said system comprising:

a blow molded hollow energy absorbing member comprising;

first and second opposing walls;

at least one fused pair of first and second recessed ribs disposed between said first and second opposing walls;

said first recessed rib is integrally molded from said first wall and having a first recessed rib end;

said second recessed rib is integrally molded from said second wall and having a second recessed rib end;

said first and second recessed ribs being integrally fused at a welded surface disposed between said first and second recessed rib ends;

said blow molded hollow impact absorbing member comprising a polypropylene resin and about approximately 3 to 20 parts by weight of an olefin based elastomer, said olefin based elastomer having a flexural modulus of not greater than 200 kg/cm^2 and a glass transition temperature not higher than -30°C.